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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/539,573	06/17/2005	Grant Berent Jacobsen	01435-0211	4510

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901 NEW YORK AVENUE, NW
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EXAMINER

RABAGO, ROBERTO

ART UNIT	PAPER NUMBER
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1713

MAIL DATE	DELIVERY MODE
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05/16/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/539,573

Applicant(s)

JACOBSEN ET AL.

Examiner

Roberto Rábago

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6,9-11 and 13-21 is/are rejected.
- 7) ☒ Claim(s) 7,8 and 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102 and/or 103

1. Claims 1-4, 6, 9, 15-18, 20 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Chang (US 5,006,500).

The reference discloses in Examples 1-3 and 8 the preparation of a supported metallocene catalyst, and use thereof in olefin polymerization. The process of making the catalyst requires pretreating a hydrated silica with TIBAl and TMA, whereupon the two aluminum alkyl compounds react with adsorbed water to chemically dehydrate the silica, which then forms the aluminoxane activator (c), followed by contact with a metallocene (b). Missing from the reference is a measurement of the MWD and melt strength of claim 20; however, these properties would appear to be inherent because applicants have claimed broad ranges of conventional values expected for polyethylene polymers made using metallocene catalysts. The burden of proof is shifted to applicants to show that the reference process would fail to make a polymer with the required properties.

2. Claim 5 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Chang (US 5,006,500).

The parent claim is discussed with respect this reference above. Missing from the reference process is a recommendation to use a sequential method of contacting the two organoaluminum compounds, stated in the claim as a product-by-process

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feature. However, there is nothing on this record which would indicate that such a process would exclude the reference product. If any differences can be shown, they would be minor and obvious, particularly in view of the broad scope of the limitation "sequentially contacted." The burden of proof is shifted to applicants to show that the reference catalyst would necessarily be outside the scope of the claims.

3. Claim 21 is rejected under 35 U.S.C. 102(b) as being anticipated by WO 2000/15672. It is noted that the prior Office action inadvertently referenced only the US patent resulting from the national stage application of the PCT application (US 6,475,945). The US document is referenced because the WO document was not available (and remains unavailable) at the time the Office action was prepared. However, this rejection of claim 21 and the content of the applied reference example is identical with that previously set forth in item 3 of the Office action mailed 9/22/2006.

As acknowledged by applicants at numbered page 10, paragraph 2 of their remarks filed 2/22/2007, previously cited reference Example 3 discloses silica treated first with triethylaluminum, and then with tris(pentafluorophenyl)aluminum. This product clearly anticipates the claim, and the question of whether or not the tris(pfp)Al component could subsequently act as an activator is irrelevant because the claim does not require any components other than a support treated with two organoaluminum compounds.

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4. Claims 1-3, 6, 9, 13-18, 20 and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Tsuie et al. (US 2003/0195306).

The reference discloses in Examples 7-11 making a catalyst comprising supporting MAO on silica, followed by contact with zirconocene, then with tris(pfp)borane and additional MAO. As is well known in the art, MAO is a mixture of cyclic and linear oligomers having R-Al-O units (see, for example, col. 5, lines 6-18 of US 5,006,500). Furthermore, low concentrations of trialkylaluminum starting materials are also expected to be present within an MAO mixture. Therefore, the inherent compositional mixture of MAO is within the scope of "at least two different organoaluminum compounds". The reference further describes olefin polymerization in Examples 14-21. Missing from the reference is a measurement of the melt strength of claim 20; however, this property would appear to be inherent because applicants have claimed broad ranges of conventional values expected for polyethylene polymers made using metallocene catalysts. The burden of proof is shifted to applicants to show that the reference process would fail to make a polymer with the required properties.

5. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chang (US 5,006,500).

The parent claim is discussed with respect this reference above. Missing from the examples is a recommendation to use fluidized bed conditions. However, one of ordinary skill in the art would be motivated to use such systems because the reference suggests gas phase polymerization col. 4, lines 26-31. A fluidized bed reactor would be

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immediately envisaged from the suggestion to use gas phase conditions because fluidized bed reactors are among the most commonly used gas phase systems.

6. Claims 7, 10, 11 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuie et al. (US 2003/0195306).

The parent claims are discussed with respect this reference above. Missing from the examples is a recommendation to use a group VI transition metal as required in claim 7. However, one of ordinary skill in the art would be motivated to use a metal from this group because the reference suggests them as "more preferred" metals at [0010]. Also missing from the examples is a recommendation to use the claimed ionic activator. However, one of ordinary skill in the art would be motivated to use such systems because the reference suggests such use at [0025]. Also missing from the examples is a recommendation to use fluidized bed conditions. However, one of ordinary skill in the art would be motivated to use such systems because the reference suggests gas phase polymerization [0032]. A fluidized bed reactor would be immediately envisaged from the suggestion to use gas phase conditions because fluidized bed reactors are among the most commonly used gas phase systems.

7. Claims 8 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable over the prior art currently of record if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

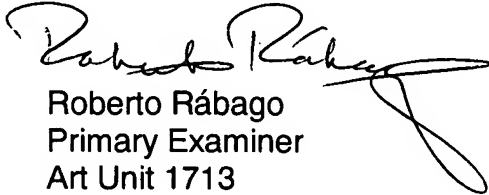
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberto Rábago whose telephone number is (571) 272-1109. The examiner can normally be reached on Monday - Friday from 8:00 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Roberto Rábago
Primary Examiner
Art Unit 1713

RR
May 8, 2007